DE 2,931,669 A1

Translated from German by the Ralph McElroy Co., Custom Division
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Code: 1505-68610

FEDERAL REPUBLIC OF GERMANY
GERMAN PATENT OFFICE
PATENT NO. 2,931,669 A1
(Offenlegungsschrift)

Int. Cl.^{3}: A 23 L 1/36

Application No: P 29 31 669.6

Application Date: August 4, 1979

Date Laid-open to Public Inspection: February 26, 1981

BREAD SPREAD AND METHOD FOR ITS PREPARATION

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Claims

1. Sweet bread spread of the type of a nut-nougat cream which consists of a mixture of nut-nougat cream and honey.

2. Sweet bread spread according to Claim 1, characterized in that it contains between 2 and 25 wt%, preferably between 4 and 12 wt%.

3. Sweet bread spread according to Claims 1 and 2, characterized in that it contains between 0.2 and 2 wt%, preferably between 2.0 and 0.8 wt% of a monodiglyceride mixture.

4. Method for the preparation of a sweet bread spread of the type of a nut-nougat cream according to Claims 1-3, characterized in that honey is mixed in a mixer or kneader with dry components, for example, sugar, cocoa powder, kernels, such as nuts or the like, and dry milk products, fats, and emulsifiers, comminuted on rolling mills, in one or more stages, to a particle size below 100 my [sic; possibly µm], and mixed in temperature-controlled stirred tanks, conches, or kneaders with additional fat, lecithins, flavorings, and antioxidants in such a way that a paste which can be spread between +4°C and +30°C is formed.

5. Method for the preparation of a sweet bread spread of the type of a nut-nougat cream according to Claims 1-3, characterized in that dry components, such as sugars, cocoa powders, kernels, such as nuts or the like, and dry milk products, are mixed with fats and emulsifiers in a mixer or kneader, comminuted on rolling mills, in one or more stages, to a particle size below 100 my, and mixed in temperature-controlled stirred tanks, conches, or kneaders with honey, additional fat, lecithins, flavorings, and antioxidants in such a way that a paste which can be spread between +4°C and +30°C is formed.

6. Method for the preparation of a sweet bread spread of the type of a nut-nougat cream according to Claims 1-3, characterized in that fat, emulsifiers, flavorings, and antioxidants are mixed with dry components, for example, sugars, cocoa powders, comminuted kernels, such as nuts or the like, and dry milk products, in a stirred tank, and this suspension is comminuted to a particle size below 100 my by a stirrer-ball mill, in one or

several passages, and honey is added before or during this comminution.

7. Method for the preparation of a sweet bread spread of the type of a nut-nougat cream according to Claims 1-3, characterized in that the dry components, for example, sugars, cocoa powders, kernels, such as nuts or the like, and dry milk products, mixed separately or with one another, are comminuted to a particle size below 100 my, on impact and/or shearing mills, and they are mixed in a kneader, a conche, or a stirred tank with fat, emulsifiers, flavorings, honey, and antioxidants, in such a way that a paste [is created] which can be spread between +4°C and +30°C.

8. Method according to Claims 4-7, characterized in that the honey is added in the form of an emulsion, which is produced by a thorough mixing of honey with fat, a mono-diglyceride mixture, and/or lecithins, or other emulsifiers, and/or other ingredients.

The invention concerns a sweet bread spread of the type of a nut-nougat cream and a method for its preparation. The invention concerns, in particular, nut-nougat creams with a noticeable fraction of honey.

Nut-nougat creams are suspensions of very finely comminuted raw materials, such as sugars, cocoa powders, nuts, dry milk products, in a fat mixture. Lecithins and antioxidants are usually admixed to these suspensions for physical and chemical stabilization. To complete the taste and for differentiation, flavorings, preferably oil-soluble flavorings, are added.

For the preparation of this suspension, several methods are used.

First (roller methods), the dry components, such as sugars, cocoa powders, precomminuted kernels, such as nuts or the like,

and dry milk products, are mixed with fats in such a way that a pasty product with a fat content between 15 and 40%, preferably between 22 and 32%, is formed. This composition is then finely comminuted in a one-stage process on a 5-roller mill or alternately, in a two-stage process on a three-roller mill for the prelevelling and on a downstream five-roller mill, to a particle size below 100 my, preferably between 45 and 30 my. A flowable intermediate product is formed in the mill, to which, in conches or kneaders, as they are usually used in the chocolate industry, additional fat, lecithins, flavorings, and antioxidants are added above room temperature.

According to another method (stirrer-ball mills, attritors), liquefied fat, optionally mixed with lecithins, is present in a temperature-controlled stirred tank, to which successive dry components, for example, sugars, cocoa powders, precomminuted kernels, such as nuts or the like, dry milk products, flavorings, and antioxidants are added in such a way that a pumpable suspension is formed. This is then finely comminuted by a stirrer-ball mill in one or several passages, until a product is formed whose fineness is similar to the product obtained in the roller process.

According to a third method, the dry components, such as sugars, cocoa powders, whole or precomminuted kernels, such as nuts or the like, and milk products, are comminuted in impact and/or shearing mills common in milling operations, mixed either individually or with one another, to a particle size below 100 my, preferably between 45 and 30 my. The freshly comminuted powder obtained in such a manner is mixed in temperature-controlled stirred tanks, conches, or kneaders with fat, lecithins, flavorings, and antioxidants in such a way that as in

the previously described methods, a product which can flow or be metered at temperatures above 35°C is formed, which solidifies to a paste which can be spread at temperatures between +4°C and +30°.

The previously described methods are frequently combined with one another in such a way that, for example, parts of the dry components used with the roller or stirrer-ball mill methods are precomminuted on impact and/or shearing mills. Likewise, the milling of a part of the aforementioned raw materials is frequently upstream from the attritor process.

The goal was to produce a high-quality, wholesome, sweet breadspread, which should have a clearly recognizable honey content.

It became evident that a repeated mixing of a nut-nougat cream with honey leads to an unstable product.

Even with a very small addition of honey to a nut-nougat cream, there is a clear rise in the viscosity so that the spreading capacity is lost. A further addition of honey leads to an increasing separation of the components; here a sticky sump with chocolate-like taste and a clearly separated oil phase is formed.

For this reason, honeys had to be selected for this use having a sufficiently intensive honey-type taste. In addition to the provenances of Uruguay, Veramiel, China White Amber, Yucatan, and the Mexican plateau, the Langnese Standard bee honey proved to be particularly suitable. In particular, already less than 25% of this honey gives a nut-nougat cream a sufficient honey taste.

The necessary viscosity lowering is attained by a lecithin mixture, preferably a lecithin-lysolecithin mixture in soybean oil, and by the simultaneous increase of the fat content. In

spite of the emulsifying effect of the lecithins, a clear oil separation occurs with this product also.

Surprisingly, this oil separation is absent if between 0.2 and 2%, preferably between 0.2 and 0.8%, of a monodiglyceride mixture are added to the product in a suitable manner.

In the usual production of a nut-nougat cream according to the roller method, emulsifiers and similar ingredients which do not have to be rolled are added to the dry components, together with a part of the fats in the conch, only after the rolling. If one proceeds in this manner in the production of a nut-nougat cream with honey, agglomerates are formed in the conch, which have such a strength that they are not dissolved again during the conching process. The product thus formed feels rough and gritty when it is eaten. This undesirable characteristic can be surprisingly avoided in that at a temperature between 20°C and 60°, a part of the fats are thoroughly mixed with the monodiglyceride mixture, a part of the lecithins, and the honey, and the emulsion thus formed is added to the rolled dry components before or during the conching process.

After a modification of this procedure, the aforementioned emulsion is added to the dry components before the rolling.

In the usual preparation of a nut-nougat cream according to the stirrer-ball mill method, all ingredients are mixed before the fine comminution. If one proceeds in such a way in the preparation of a nut-nougat cream with honey, the viscosity of this mixture of ingredients increases so strongly after the addition of the honey, that the processing to the finished product in such a unit becomes impossible.

Surprisingly, this viscosity increase in the unit is absent if a part of the needed fat quantity is mixed thoroughly at a

temperature between 20° and 60°C with the mono-diglyceride mixture, a part of the lecithins, the honey, and/or other ingredients, and the emulsion thus formed is added to the remaining components in the attritor during the fine comminution.

In the usual preparation of a nut-nougat cream according to the milling method, all milled components are mixed with the liquid and pasty components of the nut-nougat cream in a stirred tank, with one another. If one proceeds in this way in the preparation of a nut-nougat cream with honey, the viscosity increases during the mixing of the ingredients in such a way that a thorough mixing in the stirred tank becomes impossible.

Surprisingly, this viscosity increase is absent in the unit, if a part of the needed fat quantity is thoroughly mixed, at a temperature between 20°C and 60°C, with the mono-diglyceride mixture, a part of the lecithins, the honey, and/or other ingredients, and the emulsion thus formed is added to the comminuted components in the fatty phase in a suitable manner, during or after the emulsifying.

Examples

Example 1

In a temperature-controlled mixing vessel with a stirrer, 160 g soybean oil, 350 g sugar, 93.8 g skim milk powder, 120 g hazelnut pulp, 80 g defatted cocoa powder, 0.2 g vanillin, and 6 g lecithins are mixed to form a paste, placed in a laboratory attritor, and comminuted for 45 min. During this time, 190 g of an emulsion produced from 90 g honey, 90 g soybean oil, 8 g

monodiglyceride mixture, and 2 g soya lecithin in a kitchen mixer are added in portions.

Subsequently, the cream formed is separated on a vibrating screen from the balls in the stirrer-ball mill. 840 g of a cream with a measured particle size of 50 my are obtained.

Example 2

In a pilot plant kneader, 3.6 kg hazelnut pulp, 3.048 kg soybean oil, 2.4 kg defatted cocoa powder, 10.5 kg sugar, 2.814 kg skim milk powder, and 6 g vanillin are mixed together. 5700 g of an emulsion produced from 2700 g honey, 2700 g soybean oil, 240 g mono-diglyceride mixture, and 60 g soya lecithin in a kitchen mixer are kneaded into this mixture. This highly viscous paste is rolled twice on a pilot plant three-roller mill to form a flowable powder with a measured fineness of 30 my. 1752 kg soybean oil and 180 g soya lecithin are added to this powder in a temperature-controlled mixing vessel with a planetary paddle mixer while stirring for 3 h. Approximately 29 kg of a cream with a measured particle size of 30 my are obtained.

Example 3

In a pilot plant kneader, 4.8 kg hazelnut pulp, 2.07 kg soybean oil, 2.4 kg defatted cocoa powder, 10.8 kg sugar, 564 g lactose, 900 g skim milk powder, and 5 g vanillin are mixed together and kneaded, until a homogeneous mass is formed. This mass is rolled twice on a pilot plant three-roller mill to form a flowable powder with a measured fineness of 35 my.

6.18 kg soybean oil, 180 g soya lecithin, and 2.1 kg of an emulsion produced in a kitchen mixer from 900 g honey, 900 g soybean oil, 240 g mono-diglyceride mixture, and 60 g soya lecithin are added to this mixture in a temperature-controlled mixing vessel with a planetary paddle mixer and the mixture formed is stirred for 3 h. Approximately 29 kg of a cream with a measured particle size of 35 my are obtained.

Example 4

On a Retsch laboratory hammer bar-centrifugal mill, a mixture of 420 g sugar, 112 g skim milk powder, 80 g defatted cocoa powder, and 0.2 g vanillin are comminuted in three passages, and this comminuted mixture is emulsified in a temperature-controlled laboratory kneader in a mixture of 190 g soybean oil, 144 g nut pulp, and 7.8 g lecithin. To this, 180 g of an emulsion produced in a kitchen mixture from 90 g honey, 90 g soybean oil, 8 g monodiglyceride mixture, and 2 g soya lecithin are added in portions and stirred at 40°C for 4 h.

1050 g of a cream with a measured particle size of 80 my are obtained.